9. Pollution Prevention/Good Housekeeping BMPs

9.1 Overview

This chapter describes how MDOT will fulfill Permit requirements to revise and implement a program of operation and maintenance BMPs with the ultimate goal of preventing or reducing pollutant runoff from MDOT operations and properties to the maximum extent possible. The program involves the following major components:

- Operate drainage system components such as storm drain catch basins, vegetated swales, infiltration basins, and sedimentation basins to remove pollutants from storm water. This involves routine maintenance, maintenance schedules, and long-term inspection procedures to provide pollution removal effectiveness to the maximum extent practicable.
- Implement procedures for the proper disposal of operation and maintenance waste, such as dredge spoil, accumulated sediments, floatables, and other debris removed from the drainage system.
- Construct, operate and maintain state highway right-of-ways and other facilities.
- Maintain existing street cleaning and catch basin maintenance programs and enhancing the existing programs.
- Assure that vehicle maintenance activities do not impact storm water runoff quality.
- Provide permanent identification for any outfall structure constructed or installed after March 10, 2004, that discharges storm water to the waters of the state.
- Ensure that new flood management projects assess the impacts on the water quality of the receiving water and, whenever possible, shall examine existing projects for incorporation of additional water quality protection BMPs.
- Minimize the discharge of pollutants related to the storage, handling and use of herbicides and fertilizers, and provide employee training to supplement information on product labels.

This chapter is organized as follows:

- Section 9.2. describes the BMPs that MDOT will use for pollution prevention/good housekeeping for MDOT operations, and the measurable goals associated with each BMP.
- Section 9.3. describes the schedule for pollution prevention/good housekeeping BMP implementation.

9.2 BMP Identification and Measurable Goals

To implement pollution prevention/good housekeeping BMPs for MDOT operations, the BMPs described below will be implemented.

9.2.1 MDOT Manuals

As discussed in other sections, MDOT is in the process of preparing a Drainage Manual to describe MDOT's policies and procedures in the design of drainage facilities, and storm water management program BMPs for the MDOT designers and design consultants. This will be an electronic, interactive training device and will be referenced in consultant design contracts. The BMPs referenced in the Drainage Manual and the Soil Erosion and Sedimentation Control Manual will include guidance on the design and implement the BMPs.

9.2.2 Structural BMPs

Structural BMPs are physical controls that may remove pollutants from runoff. They may limit the rate of runoff from MDOT right-of-way and other facilities. As discussed in Section 3.2.1., MDOT performed an extensive review of BMPs and developed an approved list of BMPs to use on projects. Details of this analysis are provided in Appendix B. Section 3.2.1. provides a summary list of initially-approved BMPs and the internal approval process for adopting new BMPs.

There are many different options for structural controls to use during and after construction for improved water quality and quantity issues. Therefore, it is very important that goals are set along the planning and construction path to ensure that the appropriate structural controls are being used. The following will be measurable goals for the structural controls:

- Summary of new programs, policies, procedures or information.
- Summary of newly constructed structural BMPs including the number, location, and type installed.

9.2.3 Transportation Asset Management Council

Currently, two separate programs within the MDOT, the Maintenance Activity Reporting System (MARS) and Physical Feature Inventory programs, are used to document the MDOT assets and maintenance performed. The legislature enacted Act 499 of 2002, which creates a Transportation Management Council. The law requires the State Transportation Commission to point members to the new council. The new council will be coordination the asset management process with all of the public road agencies. This may include inventories of all road agency assets. Until this new council work is completed it is unclear what the scope of inventories of transportation assets will include.

9.2.4 Operation and Maintenance

Depending on location around the State, local public transportation agencies working under contract for MDOT or MDOT employees will inspect BMPs on a regular basis. At this time, counties do not keep records detailing the exact inspection and maintenance work that was performed.

MDOT constructs, operates, and maintains its streets, roads, highways, parking lots and other large paved surfaces in a manner to reduce the discharge of pollutants into the drainage system. Neglected structural BMP's may contribute pollutant loading if left

unchecked. For a structural BMP to function as designed, a regular inspection and maintenance program is needed. The inspection and maintenance of each BMP will be determined as it corresponds to guidelines that will be described in the MDOT's Drainage Manual and as described in the MDOT's Operations Maintenance Handbook. The regular inspection and maintenance for the BMPs will maintain the effectiveness and structural integrity of the BMPs.

Operation and maintenance waste materials, such as dredge spoil, accumulated sediments, floatables, and other debris that might be removed from MDOT's drainage system are disposed of at an appropriate site. Exact procedures are spelled out in the MDOT Operation and Maintenance Handbook.

MDOT also conducts other maintenance activities that help prevent storm water pollution such as ditch clean out, culvert and underdrain maintenance, Adopt-a-Highway, mowing, brush control, and bank stabilization.

These activities will help control all highway pollutants including deicing activities. MDOT uses deicing salts when conditions warrant. MDOT uses a system of calibrated salt dispensers to minimize the amount of salt applied to roadways. MDOT conducted a literature review comparing various deicing alternatives and found that salt is as cost-effective, and is no more environmentally harmful than any of the other alternatives reviewed.

The following measurable goals for the BMP Inspection and Maintenance Plan will be recorded in the Annual Report:

- Summary of new programs, policies, procedures or information
- Summary of inspection/maintenance performed on structural BMPs

9.2.5 Fleet Maintenance

MDOT ensures that proper precautions are taken so that vehicle maintenance activities do not impact storm water runoff quality. A Pollution Incidence Prevention Plan (PIPP) has been written and is implemented for all MDOT maintenance and storage facilities. Planning is required by the Part 5, Spillage of Oil and Polluting Materials administrative rules promulgated pursuant to Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451) MCL 324.3101 *et seq.* These rules were revised effective August 31, 2001.

The following measurable goal for the operation and maintenance of MDOT fleets will be recorded in the Annual Report:

- Summary of new programs, policies, procedures, or information
- Summary of PIPP audits conducted

9.2.6 Storm Sewer Outfall Labeling

The MDOT will provide permanent identification to all outfall structures that are installed or constructed after March 10, 2004. MDOT is currently working on design standards needed to meet this requirement.

The following measurable goals for the operation and maintenance of MDOT storm sewers through labeling will be recorded in the Annual Report:

- Summary of new programs, policies, procedures, or information
- Number of storm sewer outfalls labeled

9.2.7 Flood Control Projects

MDOT does not perform flood control projects.

9.2.8 Pesticides and Fertilizers

Pesticides and fertilizers may be applied on MDOT right-of-way by certified applicators, consisting of MDOT personnel or contractors in accordance with state and federal regulations. MDOT's pesticide and herbicide program is tailored to each region based on their needs. The objectives of the program are:

- To maintain the highway roadside for a safe traveling condition by controlling the vegetation with herbicides and growth regulators.
- To preserve the structures and facilities by eliminating vegetation growth in areas that cause breakup of structures.
- To create an atmosphere of care and pride at certain facilities by maintaining the turf areas in a weed-free, vigorous growing condition.
- To protect MDOT's resources from insects and other harmful pests.

In Michigan, only a registered or certified Pesticide Applicator, Category 6 is eligible to apply either general-use or restricted-use pesticides to the highway right-of-way. MDOT holds a training session that is approved by the Michigan Department of Agriculture each year to certify employees. MDOT's policy is to use herbicides only on an as-needed basis. Each region's need for herbicides is established annually.

The following measurable goals for the operation and maintenance of pesticides and fertilizers will be recorded in the Annual Report:

- Summary of new programs, policies, procedures, or information
- Number of certified MDOT personnel
- Number of individuals attending the yearly training session

9.3 Implementation Schedule

For review of the Pollution Prevention/Good Housekeeping Projects, the BMPs discussed in this chapter are summarized in the following Table 9-1.

Table 9-1 Pollution Prevention/Good Housekeeping Summary

ID No.	BMP	Measurable Goals
9.2.2	Structural Controls	Summary of new programs, policies, procedures or information Summary of newly constructed structural BMPs including the number, location and type installed
9.2.4	Operation and Maintenance	Summary of new programs, policies, procedures or information Summary of inspection/maintenance performed on structural BMPs
9.2.5	Fleet Maintenance	Summary of new programs, policies, procedures, or information Summary of PIPP audits conducted
9.2.6	Storm Sewer Labeling	Summary of new programs, policies, procedures, or information Number of storm sewer outfalls labeled
9.2.8	Pesticides and Fertilizers	Summary of new programs, policies, procedures, or information Number of certified MDOT personnel Number of individuals attending the yearly training session

MDOT will continue work on any necessary tasks upon approval of this plan by MDEQ and the availability of funds. The existing street cleaning and catch basin maintenance programs will be maintained. The schedule for the asset management program is unknown at this time. Beginning October 1, 2003, annual reports will be issued from the Transportation Asset Management Council outlining long-range plans.

Table 9-2 is an estimated implementation schedule for all of the actions needed to fulfill the BMPs discussed in this chapter for the pollution prevention/good housekeeping projects.

Table 9-2 Implementation Schedule for Pollution Prevention/Good Housekeeping

ID No.	Action	Year of Implementation			
		2002	2003	2004	2005
9.2.1	**MDOT Manuals**				
	Drainage Manual		X		
9.2.2	**Structural BMPs**				
	Structural BMPs		X	X	X
9.2.3	**Transportation Asset Management Council**				
	Inventory of Assets		X	X	X
9.2.4	**Operation and Maintenance**				
	Continue existing operation and maintenance program	X	X	X	X
9.2.5	**Fleet Maintenance**				
	Continue existing fleet maintenance program	X		X	X
9.2.6	**Storm Sewer Labeling**				
	Permanently label newly constructed storm sewer outfalls	X	X	X	X
9.2.7	**Flood Control Projects**				
	Does not apply – No action required				
9.2.8	**Pesticides and Fertilizers**				
	Continue existing pesticide and fertilizer program	X	X	X	X